

-- REMARKS --

The present amendment replies to a Final Office Action dated December 11, 2006. Claims 1-7 and 9-21 are pending in the present application. In the Final Office Action, the Examiner rejected pending claims 1-7 and 9-21 on various grounds. The Applicants respond to each ground of rejection as subsequently recited herein and respectfully request reconsideration of the present application.

Specification

The specification was objected to for lacking a heading and a brief description of the drawings. The Applicants respectfully decline to add headings, as they are only suggested and not required. *See* MPEP §608.01(a). The specification has been amended to add a brief description of the drawings at page 4, line 6. Withdrawal of the objection to the specification is respectfully requested.

35 U.S.C. §102

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the . . . claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Thus, to warrant the §102 rejection, the references cited by the Examiner must show each and every limitation of the claims in complete detail. The Applicants respectfully assert that the cited reference fails to do so.

- A. Claims 1-3 and 9-17 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,839,823 to Hou, *et al.* (the *Hou* patent).

The Applicants respectfully assert that the *Hou* patent fails to teach or suggest all the claim limitations. The *Hou* patent fails to disclose, teach, or suggest an illumination system having an optical means comprising a free-flowing reflective powder to at least substantially shield the blocking means from direct exposure to light radiated from the light source, as recited in independent claim 1.

At most, the *Hou* patent discloses filling interstitial regions between microprisms with a solid filler, not a free-flowing reflective powder as claimed. The sidewalls 136 of the microprisms 122 of the light-directing assembly 120 define regions 128 adjacent the sidewalls 136; in a light-directing assembly 120 with multiple microprisms 122, these regions may be referred to as "interstitial" regions. These regions 128 are provided with a reflective element which is a highly-reflective solid filler 160. These materials may be utilized in carriers such as dry powder, paint, or putty. *See* Figure 2; column 4, lines 42-54. As seen in FIG. 2, the solid filler 160 of the *Hou* patent is not enclosed and would fall from the interstitial regions 128 were it a free-flowing powder.

In the Response to Arguments section of the Final Office Action dated December 11, 2006, the Examiner noted that whether the device of the *Hou* patent holds dry powder in a confined space is not clearly disclosed, and maintained that the assertion in the *Hou* patent that the solid filler may be a diffuse dry powder is sufficient to anticipate the limitation that the optical means comprise a free-flowing reflective powder, as recited in independent claim 1. The reasoning was that at some time the solid powder is dry and free flowing either when the device is being assembled/manufactured or in use.

The Applicants respectfully submit that a hypothetical manufacturing stage is not a sufficient basis for rejection of independent claim 1 under 35 U.S.C. §102(b), which requires that a reference must teach every aspect of the claimed invention either explicitly or impliedly. The identical invention must be shown in as complete detail as is contained in the . . . claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The *Hou* patent fails to disclose an embodiment of an illumination system that could use a free-flowing powder. If powder were to be used in the device of the *Hou* patent, the powder would necessarily be packed to form the solid filler 160 as described in the *Hou* patent and would not be free flowing. *See* Figure 2; column 4, lines 42-54. The device of the *Hou* patent is not functional at a hypothetical manufacturing stage before the filler material is solid.

Claims 2, 3, and 9-17 depend directly or indirectly from independent claim 1 and so include all the elements and limitations of independent claim 1. The Applicants therefore respectfully submit that dependent claims 2, 3, and 9-17 are allowable over the *Hou* patent for at least the same reasons as set forth above with respect to independent claim 1.

Withdrawal of the rejection of claims 1-3 and 9-17 under 35 U.S.C. §102(b) as being anticipated by the *Hou* patent is respectfully requested.

35 U.S.C. §103

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references when combined must teach or suggest all the claim limitations. *See* MPEP 2143. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). *See* MPEP 2143.03. The Applicants respectfully assert that the cited references fail to teach or suggest all the claim limitations.

B. Claims 4-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over the *Hou* patent.

The Applicants respectfully assert that the *Hou* patent fails to teach or suggest all the claim limitations. The *Hou* patent fail to disclose, teach, or suggest an illumination system having an optical means comprising a free-flowing reflective powder to at least substantially shield the blocking means from direct exposure to light radiated from the light source, as discussed above for independent claim 1. Claims 4-6 depend directly or indirectly from independent claim 1 and so include all the elements and limitations of independent claim 1. The Applicants therefore respectfully submit that dependent claims 4-6 are allowable over the *Hou* patent for at least the same reasons as set forth above with respect to independent claim 1.

Withdrawal of the rejection of claims 4-6 under 35 U.S.C. §103(a) as being unpatentable over the *Hou* patent is respectfully requested.

- C. Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over the *Hou* patent in view of U.S. Patent No. 5,249,104 to Mizobe (the *Mizobe* patent).

The Applicants respectfully assert that the *Hou* patent and the *Mizobe* patent, alone or in combination, fail to teach or suggest all the claim limitations. The *Hou* patent fails to disclose, teach, or suggest an illumination system having an optical means comprising a free-flowing reflective powder to at least substantially shield the blocking means from direct exposure to light radiated from the light source, as discussed above for independent claim 1. Claim 7 depends directly from independent claim 1 and so includes all the elements and limitations of independent claim 1. The Applicants therefore respectfully submit that dependent claim 7 is allowable over the *Hou* patent for at least the same reasons as set forth above with respect to independent claim 1. The *Mizobe* patent also fails to disclose this element.

The *Mizobe* patent also fails to disclose powder mixed with colour pigments as claimed in dependent claim 7. At most, the *Mizobe* patent discloses a light dispersing plate 12 of semitransparent resin including white fine pigment powders. See Figure 2; column 4, lines 15-23. A color sheet 11 provides any color. See column 4, lines 24-42.

The Applicants also respectfully suggest that the *Mizobe* patent is non-analogous prior art. To be analogous prior art, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. See MPEP 2141.01(a). The field of an optical display device such as an emblem mounted on an automotive vehicle is not in the field of an illumination system of the present invention. The problem of an optical display device which can exhibit a display pattern not only by daylight but also an internal light source in the nighttime of the *Mizobe* patent is not relevant to the problem of collimation cut-off angle addressed by the present invention. Therefore, the *Mizobe* patent is non-analogous prior art.

Withdrawal of the rejection of claim 7 under 35 U.S.C. §103(a) as being unpatentable over the *Hou* patent is respectfully requested.

- D. Claims 18-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over the *Hou* patent in view of U.S. Patent No. 6,635,306 to Steckl, *et al.* (the *Steckl* patent).

The Applicants respectfully assert that the *Hou* patent and the *Steckl* patent, alone or in combination, fail to teach or suggest all the claim limitations. The *Hou* patent fails to disclose, teach, or suggest:

An illumination system including a channel plate parallel the wedge plate, the channel plate forming a plurality of reflective elements filled with free-flowing reflective powder; and wherein each of the interstitial regions is aligned with one of the plurality of reflective elements and one of the plurality of absorbing black layers is disposed between one of the plurality of reflective elements and the aligned interstitial region, as recited in independent claim 18; or

An illumination system including a base holding plate forming a plurality of reflective elements, each of the plurality of reflective elements being in communication with one of the interstitial regions, the plurality of reflective elements and the interstitial regions being filled with free-flowing reflective powder, as recited in independent claim 21.

The *Hou* patent fails to disclose free-flowing reflective powder located outside of the interstitial region. *See* column 4, lines 46-49; column 5, lines 20-32. As discussed in the present application, the device of the *Hou* patent lacks a sharp transition between the inner angular region within which light is emitted from the illumination system and the outer angular region within which substantially no light is emitted. *See* page 2, line 3-25. The reflective elements of the present invention serve to substantially shield the absorbing layers 11 from direct exposure to light radiated from the light source, and reflect light away from them so that a high lumen output from the illumination system can be maintained through minimized optical absorption losses. *See* page 4, line 31-34. While the specification is not to be read into the claims, the verbiage of the claims must be considered to possess their

ordinary usage as would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification. *See* MPEP 2111. The *Hou* patent also fails to disclose a channel plate as recited in independent claim 18 or a base holding plate as recited in independent claim 21, which are used to form the reflective elements holding the free-flowing reflective powder. *See* Figure 2 of the *Hou* patent versus Figures 1-2 of the present application. The *Steckl* patent also fails to disclose these elements.

Claims 19-20 depend directly from independent claim 18 and so include all the elements and limitations of independent claim 18. The Applicants therefore respectfully submit that dependent claims 19-20 are allowable over the *Hou* patent in light of the *Steckl* patent for at least the same reasons as set forth above with respect to independent claim 18.

Regarding claim 19, the *Hou* patent fails to disclose, teach, or suggest a channel plate and therefore cannot disclose absorbing black layers disposed on the channel plate as recited in claim 19. *See* Figure 2.

Regarding claim 20, all embodiments of the device of the *Hou* patent having a filled reflective element employ a solid filler in the interstitial regions, so the *Hou* patent fails to disclose, teach, or suggest each of the interstitial regions filled with air as recited in claim 20. *See* Figure 2. The *Hou* patent discloses that a solid filler of reflectivity less than 90% may be desirable, not that a material with no reflectivity can be used. *See* column 4, lines 58-62.

Withdrawal of the rejection of claims 18-21 under 35 U.S.C. §103(a) as being unpatentable over the *Hou* patent in light of the *Steckl* patent is respectfully requested.

SUMMARY

Reconsideration of 1-7 and 9-21 is respectfully requested in light of the remarks herein. The Applicants submit that claims 1-7 and 9-21 fully satisfy the requirements of 35 U.S.C. §§102, 103, and 112. In view of foregoing remarks, favorable consideration and early passage to issue of the present application are respectfully requested.

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Respectfully submitted,

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